

allocating, by the operating system, a context identifier for indicating a request storing area of the process, and further mapping a memory page corresponding to the context identifier as an accessing address to a pending register indicating that there is an unprocessed request;

writing, by the process, contents of operation requests to the I/O device or the I/O interface into the request storing area;

notifying, by the process, the I/O device or the I/O interface that there is an unprocessed request by use of the accessing address for the pending register; and

reading, by the I/O device or the I/O interface, the operation requests of the process which are stored at the location related to the context identifier stored in the pending register.

3. (Amended) The access method according to claim 1, comprising the steps, performed by the I/O device or the I/O interface, of:

identifying that the pending register has been accessed;
obtaining the physical address of the request storing area of the process having accessed the pending register by referring to the embedded memory storing the physical address of the request storing area of each process based on the context identifier; and

reading out the contents of the request storing area, and of realizing the operation requests.

4. (Amended) The access method according to claim 1,
wherein the physical address specifying the I/O device or the I/O interface includes a function select field indicating a position of the pending register and a context identifier field indicating the process, and

an address decoder stores the context identifier of the physical address in the pending register in the case where a fixed address indicating the position of the pending register is stored in the function select field of the physical address.

5. (Amended) The access method according to claim 1, wherein other data corresponding to the context identifier is stored in the pending register according to needs.

6. (Amended) The access method according to claim 1, wherein, in any one of the cases where the process requests a close procedure of the I/O device or the I/O interface to the operating system and where the process is ended, the operating system withdraws the physical page for the pending register allocated to the process, withdraws the context identifier for the I/O device or the I/O interface, and/or clears an entry of the physical address to the request area of the process on the embedded memory.

7. (Amended) A recording medium having an access-processing program, wherein the access-processing program includes the steps of:
requesting, by a process, an open procedure of an I/O device or an I/O interface to an operating system;

allocating, by the operating system, a context identifier for indicating a request storing area of the process, and further mapping a memory page corresponding to the context identifier as an accessing address to a pending register indicating that there is an unprocessed request;

writing, by the process, contents of operation requests to the I/O device or the I/O interface into the request storing area;

notifying, by the process, the I/O device or the I/O interface that there is an unprocessed request by use of the accessing address for the pending register; and

reading, by the I/O device or the I/O interface, the operation requests of the process which are stored at the location related to the context identifier stored in the pending register.

Please add new claims ~~8-10~~ as follows:

~~8.~~ (New) An address decoding method for selecting a physically same object device in a computer system, the method comprising the steps of:

selecting an object device using only a part of a physical address for decoding; using another part of the physical address as an identifier for distinguishing multiple physical addresses selecting the object device; and using the identifier in order to identify an application process having accessed the object device.

~~9.~~ (New) A computer system having an address decoder selecting a physically same object device, comprising:

means for selecting an object device by use of only a part of a physical address for decoding the address; means for identifying an identifier by use of another part of the physical address as the identifier for distinguishing multiple physical addressed selecting the object device; and means for identifying an application process having accessed the object device by use of the identifier.

~~10.~~ (New) The computer system according to claim ~~9~~, further comprising:

means for executing requests corresponding to the identified application process by the object device based on contents of access.